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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Bahram Javidi

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EXAMINER

CARTER, AARON W

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. /

09/822,805

Applicant(s)

JAVIDI ET AL.

Examiner

Aaron W. Carter

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 is/are pending in the application.
- 4a) Of the above claim(s) 68-73 and 80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-11, 16-19, 23-26, 37-44, 46-48, 50 and 74-79 is/are rejected.
- 7) ☒ Claim(s) 5-7, 12-15, 20-22, 27-36, 45, 49 and 81-84 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This action is responsive to papers filed on November 26, 2004.

Election/Restrictions

2. Claims 68-73 and 80 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on June 21, 2004.

Drawings

3. The drawings were received on November 26, 2004. These drawings are accepted.

Response to Arguments

4. Applicant's arguments, see Remarks, pages 18-20, filed November 26, 2004, with respect to the rejection(s) of claim(s) 1, 16, 23 and 46 under 35 USC 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of USPN 4,900,128 to Lom.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 8-11, 16-19, 23-26, 37-44, 46-48, 50-52 and 74-79 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,900,128 to Lom.

As to claim 1, Lom discloses a method of pattern recognition comprising:

Generating a hologram of a reference object (column 5, lines 3-7);

Generating a hologram of an input object (column 5, lines 7-11); and

Correlating the hologram of the reference object with the hologram of the input object to generate a set of correlation peaks (Fig. 3, element 54 and column 5, lines 39-46, wherein the FT hologram or matched filters for both is formed in element 48 and then they are correlated in element 54 to detect overlap).

As to claim 2, Lom discloses the method as set forth in claim 1, further comprising analyzing the set of correlation peaks generated by the correlation of the hologram of the reference object with the hologram of the input object wherein the presence of a correlation peak indicates similarity between the reference object and the input object and wherein the lack of the presence of a correlation peak indicates dissimilarity between the reference object and the input object (column 5, line 66 – column 6, line 33).

As to claim 3, Lom discloses the method as set forth in claim 1, further comprising recording the hologram of the reference object (column 5, lines 3-7, wherein photomedium corresponds to recording).

As to claim 4, Lom discloses the method as set forth in claim 1, further comprising recording the hologram of the input object (column 5, lines 7-11, wherein photomedium corresponds to recording).

As to claim 8, Lom discloses a method of pattern recognition comprising:

Generating a hologram of a reference object (column 5, lines 3-7);

Generating a hologram of an input object (column 5, lines 7-11);

Defining a window within the hologram of the input object (Fig. 3, Overlap area);

Correlating the hologram of the reference object with the window defined within the hologram of the input object to generate a set of correlation peaks (Fig. 3, element 54 and column 5, lines 39-46, wherein the FT hologram or matched filters for both is formed in element 48 and then they are correlated in element 54 to detect overlap).

As to claim 9, please refer to the rejection of claim 2 above.

As to claim 10, please refer to the rejection of claim 3 above.

As to claim 11 please refer to the rejection of claim 4 above.

As to claims 16-19, please refer to rejections made above for claims 1-4 respectively.

As to claim 23-26, please refer to rejections made above for claim 8-11.

As to claim 37, Lom discloses the method as set forth in claim 3, wherein the recording of the hologram of the reference object includes digitally recording the hologram of the reference object (column 1, lines 8-10).

As to claim 38, Lom discloses the method as set forth in claim 37, wherein the digitally recording of the hologram of the reference object comprises storing the hologram of the reference object in a computer readable storage medium (column 1, lines 8-10).

As to claims 39 and 40, please refer to rejections made above for claims 37 and 38 respectively.

As to claims 41 and 42, please refer to rejections made above for claims 37 and 38 respectively.

As to claims 43 and 44, please refer to rejections made above for claims 37 and 38 respectively.

As to claims 46 and 47, please refer to rejections made above for claims 1 and 2 respectively.

As to claims 48 and 50, please refer to rejections made above for claims 8 and 2, respectively.

As to claim 51, Lom discloses the method as set forth in claim 1, wherein the reference object comprises an optical image, a digitized image, a 1D set of data, a 2D set of data, a multi-dimensional set of data, an electrical signal, an optical signal, a 2D phase object, a multi-dimensional phase object or a color object (Fig. 3, wherein field of view A corresponds to an optical signal).

As to claim 52, Lom discloses the method as set forth in claim 1, wherein the input object comprises an optical image, a digitized image, a 1D set of data, a 2D set of data, a multi-dimensional set of data, an electrical signal, an optical signal, a 2D phase object, a multi-dimensional phase object or a color object (Fig. 3, wherein field of view B corresponds to an optical signal).

As to claim 74, please refer to the rejections made for claim 51 above.

As to claim 75, please refer to the rejections made for claim 52 above.

As to claim 76, please refer to the rejections made for claim 51 above.

As to claim 77, please refer to the rejections made for claim 52 above.

As to claim 78, please refer to the rejections made for claim 51 above.

As to claim 79, please refer to the rejections made for claim 52 above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 53-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lom in view of USPN 6,366,698 to Yamakita.

As to claims 53-55, Lom discloses the method of claim 1.

Lom does not disclose expressly his invention further comprising conveying the hologram of the reference or input object to a remote location over a distributed computer network.

However, Yamakita discloses a pattern recognition process that involves conveying reference and input data over a computer network (Fig. 4 and 10B).

Lom & Yamakita are combinable because they are from same area of pattern recognition.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the invention of Lom with the teaching provided by Yamakita.

The suggestion/motivation for doing so would have been that by conveying the reference and input object to a remote location on a computer network, provides a device having a simple structure with easy operation (Yamakita, column 2, lines 53-56).

Therefore, it would have been obvious to combine Lom with Yamakita to obtain the invention as specified in claims 53-55.

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As to claim 56-58, please refer to the rejections made above to claims 53-55, respectively.

As to claim 59-61, please refer to the rejections made above to claims 53-55, respectively.

As to claim 62, Lom discloses the method as set forth in claim 1, while Yamakita further discloses processing the reference object by image compression (column 11, lines 52-67).

As to claim 63, the combination of Lom and Yamakita disclose the method as set forth in claim 62, Yamakita further discloses conveying the compressed data to remote locations over a distributed computer network (Fig. 4, 10b, and column 11, lines 52-67).

As to claim 66, the combination of Lom and Yamakita disclose the method as set forth in claim 62, Yamakita further discloses processing data of the reference object by image decompression (column 11, lines 52-67, wherein if something is compressed it is inherent that it will be decompressed for use).

As to claims 64, 65 and 67, please refer to the rejection made for claims 62, 63, and 66.

Allowable Subject Matter

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9. Claims 5-7, 12-15, 20-22, 27-36, 45, 49 and 81-84 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 4,053,228 to Schiller discloses producing holograms.

USPN 6,263,104 to McGrew discloses producing holograms.

USPN 6,002,499 to Corboline et al. discloses producing holograms.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W. Carter whose telephone number is (571) 272-7445.

The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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